DOCUMENT RESUME

ED 181 328 CE 023 956

AUTHOR Gideonse, Hendrik D.
TITLE A Model for Educational Research and Development: 1985. Occasional Paper No. 44.
INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.
PUB DATE Jun 78
NOTE 26p.; Paper presented at The National Center for Research in Vocational Education staff development seminar (Columbus, OH, June 1978).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Behavioral Science Research; Community Involvement; *Educational Development; *Educational Research; Government Role; *Interaction; *Models; *Policy; Policy Formation; Research and Development Centers; Research Utilization; School Districts; School Involvement; Social Science Research; *Teacher Participation; Technology Transfer; Vocational Education

ABSTRACT

Three broad statements summarizing nine axioms underlie a conceptualization of the character of behavioral and social research: (1) social and behavioral science is inherently reflexive, (2) ethics and epistemology are inseparable, and (3) the inherent complexity of behavioral and social phenomena must be reflected in the models developed to guide the support of productive educational research and development (R&D). The idea of differing epistemologies suggests that ignorance of or failure to recognize the worth of others' work leads to conflict between practitioners and researchers, research administrators and politicians as well as to slow adoption of research. A promising interaction model for educational research focuses on the outcomes of research and those who have a stake in the outcomes. Relationships between "stakeholders" and outcomes vary. The form of an outcome is related to accessibility to stakeholders: stakeholders may have several relations in respect to a research outcome--primary, secondary, or tertiary. Policy implications flowing from the model lie in three main areas: the legitimization of a broader array of R&D activities, functions, and actors; decentralization of authority and responsibility for educational R&D; and the demand for much more careful analysis and attention to policy in its own right. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED181328

Occasional Paper No. 44

A MODEL FOR EDUCATIONAL RESEARCH AND DEVELOPMENT: 1985

by

Hendrik D. Gideonse

Professor of Education and Policy Science
and
Dean, College of Education and Home Economics
University of Cincinnati

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Joel Magisos

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The National Center for Research in Vocational Education
The Ohio State University
Columbus, Ohio 43210

June 1978

CE 023 956

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE NATIONAL CENTER MISSION STATEMENT

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

PREFACE

The National Center for Research in Vocational Education is indebted to Dr. Hendrik D. Gideonse for his remarks on "A Model for Educational Research and Development: 1985."

In his presentation, Dr. Gideonse shares his notions about the nature of behavioral and social research—notions that he thinks help to explain "some of the enduring puzzles" of the field of educational research and development. Additionally, he presents a simple interaction model which relates the outcomes of research to those who have a stake in those outcomes.

A graduate of Harvard University, Dr. Gideonse received an Ed.D. in history and philosophy in 1963 and a master's degree in education in 1959. He received a bachelor of arts degree in political science from Amherst College in 1958.

In former positions, he served as instructor at Wheelock College in Boston and at Bowdoin College in Brunswick, Maine; Specialist for Social Sciences and Research Coordinator, Curriculum Branch, Division of Educational Research, USOE; Program Advisor, Division of Educational Research, USOE; and Director, Program Planning and Evaluation Staff, Bureau of Research, USOE.

On behalf of the National Center and The Ohio State University, I take pleasure in presenting Dr. Gideonse's lecture, "A Model for Educational Research and Development: 1985."

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

A MODEL FOR EDUCATIONAL RESEARCH AND DEVELOPMENT: 1985

Introduction

Large-scale support of educational research and development in the United States is now almost twenty years old. Legislative attention at the presidential level has twice been devoted to the field. Serious attempts have been made by the National Council for Educational Research to address policy matters pertinent to the most comprehensive concerns embracing educational R&D. Depending on the coding system used and on whether one lists only the funds *directed* by appropriation or policy to the support of educational research and development as distinct from monies that *end up* supporting education related research and development, the total amount available annually for educational R&D and related activities ranges from less than $200 million to more than a half billion dollars.

Despite the scale of effort, the focused attention to policy, and the highest level executive concern, however, few if any clear outlines of shared understandings about our field exist. We have not decided who we are or what we ought to be; nor have we decided what policies are required—sustained over time—to organize, support, and manage educational research and development to produce demonstrable beneficial impact on the learning and education of children and adults.

The lack of clarity and the absence of what might best be called an overall rationality of policy for educational research and development, are functions of unresolved, indeed largely unexamined, issues concerning the nature of educational research and development and its purposes.

I want to explore conceptually why I think this is so and what might be done about it. I want to undertake the exploration as boldly as I can, in effect, to "take a flyer" with the analysis. I know that problems will be found with what I will propose here. I know there are implications that are troublesome. I share that worry about some of them.

On the other hand, there is not enough discussion of these matters, given their presence and their importance to the work and purposes of educational research and development. The ideas are offered, therefore, in the spirit of dialog and dialectic. Subject to the test and refinement that debate and challenge always bring to human thought, the ideas presented through this essay will hopefully contribute to the improvement of the relation of inquiry to educational practice.

Approaching educational research and development conceptually is a formidable task. Consider, for example, the possible frames of reference for such an examination:

1. Innumerable topics of study are embraced by educational R&D.
2. The process of education takes place within a rich political context.
3. Many functions and activities are considered to be part of research, broadly defined.
4. The relationship between research, however defined, and the purposes in terms of which it is sponsored, supported, and conducted, is always complex.

5. Stakeholders in the enterprise are numerous and bear complex interrelations with one another.

Presumably, if the task were to define the domain of educational research and development, it would be necessary to assure that all of the above phenomena were somehow taken into account. Rather than mapping the manifestations of educational R&D, however, I want to examine its intrinsic nature. What I want to explore, to borrow a notion, is its deep structure.

Conceptualizing Behavioral and Social Research

Behavioral and social research have a number of characteristics which fundamentally differentiate them from other kinds of inquiry. Notwithstanding those differences, however, the positivistic assumptions underlying other kinds of inquiry, particularly those which are collectively referred to as the natural sciences, have been uncritically accepted as models to guide our own research.

The differences which exist in behavioral and social research grow primarily out of three phenomena. These are (1) human values and the cultures in which those values find expression, (2) time, and (3) human consciousness.

The characteristics of behavioral and social research of most importance can be expressed in a number of axioms:

Axiom No. 1. Everything about behavioral and social research is integrally and inseparably linked to matters of human value. Who does it, how it is done, who sponsors it, what ends are intended, what the outcomes are, who the subjects are, how decisions are made about it, and so on, are all susceptible to value premises and valuing acts. Susceptibility is the property of being qualitatively transformable or mutable with attendant consequences for meaning and effect.

There are many dimensions to this. For example, recall the debate just a few years ago about research on delinquency. The concept itself had strong value connotations and in effect placed the responsibility for the delinquency on the juvenile rather than on the circumstance from which the target populations emerged.

Does the controversy over operant conditioning proceed independently of its conceptual power, its intellectual sophistication? Only in part. The very elegance of the formulation is achieved through disciplined use of terminology which in the eyes of some takes away the richness and ambiguity (to say nothing of the reality of inner experience) that many hold as a hallmark of human experience.

How should the overreliance of educational research on quantitative analysis be interpreted in light of societally-induced math anxiety in women in our culture? Without denying that human behavior can be interpreted in quantitative terms, is that the most meaningful approach even though we know how to do it so well?

What about the choices implicit in whether to seek understanding of human learning in terms of psychological models, social-psychological models, or political models? Subtle cues as to what is important and why, are signaled by such choices. What are they? What do they mean? What should we do about them?

Proof that value issues are involved does not require the presence of either conflict or controversy. Their absence only indicates that the values that are finding expression in a given study or line of inquiry, are, in that setting and time, shared by those who are involved, related to, or otherwise aware of the work. The values imbedded in behavioral and social research, therefore, are not always easy to discern.

Axiom No. 2. The behavioral and social researcher is always conceptually inside the system or phenomenon under study. This is so whether it is only a part of society under study (e.g., individuals or an institution) or the whole of it. This is so because the language used in conducting and reporting the inquiry is meaningful to the researcher and the researcher's audience(s) only insofar as those who use the language have had the experiences to which they believe the words and syntax apply.

Pirandello gives us a reverse illustration of the meaning here. In *Six Characters in Search of an Author* he has one of his characters say:

> But don't you see that the whole trouble lies here. In words, words. Each one of us has within him a whole world of things, each man of us his own special world. And how can we ever come to an understanding if I put in the words I utter the sense and value of things as I see them; while you who listen to me must inevitably translate them according to the conception of things each one of you has within himself. We think we understand each other, but we never really do.[1]

Language, of course, is not the only referent for this axiom. The problems the researcher chooses to work on, the way in which they are framed, and the way in which the work is reported all bear reference to a context of need, understanding, and intended impact.

Still a third dimension of being inside the system is that the behavioral and social researcher always works at a certain point in time. Historical context and language interact in subtle ways to alter meaning, consequence, and import. Pirandello again gives us guidance. One of his characters has been asking questions, and when challenged why he asks the questions, he responds by saying:

> But only in order to know if you, as you really are now, see yourself as you once were with all the illusions that were yours then, with all the things both inside and outside of you as they seemed to you—as they were then indeed for you. Well, sir, if you think of all those illusions that mean nothing to you now, of all those which don't even *seem* to you to exist any more, while once they *were* for you, don't you feel that . . . but the very earth under your feet is sinking away from you when you reflect that in the same way this you as *you* feel it today—all this present reality of yours—is fated to seem a mere illusion to you tomorrow?[2]

Axiom No. 3. Every researcher must adopt some vantage point for analysis. It may be the dominant values and assumptions that guide the society as a whole. It may be

---

[1] Pirandello, Luigi, "Six Characters in Search of an Author," in *Naked Masks, Five Plays.* Eric Bentley, Editor, New York, Dutton, 1952, p. 224.

[2] Ibid., p. 265.

the values and assumptions personally accepted by the researcher as the study is undertaken. The vantage point may be explicit; just as often it is not.

The vantage point may be obvious. The decision may be made to study learning from the point of view of the scholar rather than that of the teacher. But in doing so, all of the values and fashions of academe are imported into the process. These are not necessarily, or even likely, to be those of the teacher or school principal.

Less obvious are the kinds of choices implicit in decisions made long ago to approach matters psychologically, sociologically, or organizationally—choices which are invested with all kinds of subtle significance as a function of having been lived with for years and having been made by individuals at crucial choice points in their careers. The vantage point notion is as true whether it is only part of society under study (e.g., individuals or an institution) or the whole of it (e.g., Myrdal's *American Dilemma*, Riesman's *Lonely Crowd,* or Jencks' *Inequality*).

Axiom No. 4. The acceptance of a vantage point, an operating context, is an implicit alliance with it. Knowledge gained as a result will fit the parameters of the accepted context and will be useful in those terms. Knowledge that might have accrued as a consequence of adopting a different frame of reference, a different vantage point, will not be forthcoming nor will the implicit challenge to that context that might otherwise develop be likely to arise.

If we do research on delinquency or cultural deprivation, we tend to reinforce the root concept. If we use quantitative methodology we reinforce images of human behavior following mathematical rules (as contrasted, more modestly, to being partially describable in such terms). If research methodologies are employed conducive to or expressive of behaviors or attitudes that are classified, for example, as "masculine," the knowledge generated by such methodologies will tend to fit and support "masculine" metaphors and less so the metaphors common to other continua classified by our culture as "feminine."

Axiom No. 5. By virtue of the fact that it is done, any social research study alters the nature of the problem that was studied. Each discovery alters the situation by virtue of the discovery, makes the situation new, makes it not yet fully known, and by implication never fully knowable.

I vividly remember as a boy my father commenting on the irony of *Time's* cover story devoted to Riesman's other-directed man. The day the magazine gave popular vent to the concept, was the day it no longer bore the same degree of truth that it had the week before it appeared. Each person reading it was certain to respond in one fashion or another. In eliciting such responses Riesman's description and analysis altered what he had just described. Society, therefore, as an object of inquiry has something of the characteristic of the no-longer-with-us Old Dutch Cleanser can with its infinite series of little Dutch girls holding a can of Old Dutch Cleanser on which is depicted a little Dutch girl holding a can of cleanser and so on.

Support for project research, development, or dissemination, has the same interventionist impact as *findings*. Support alone, especially when it comes from public or quasi-public agencies, has the effect of signifying importance to say nothing of raising to public view.

Because of the visibility phenomenon, closely attendant upon the provision of major support, an activity does not have to be successful to have an impact. In fact, non-successes can have as much impact as successes. They can lead, for example, to withdrawal of support for future efforts

in the particular direction toward which the failure had been oriented, indeed, to the withdrawal of support for the entire general area of inquiry or development. (Interestingly enough, as we pursue this negative theme a bit more, *successes* can imperil lines of work, too. Consider the consequences attendant upon the successful development of *Man: A Course of Study.*)

Axiom No. 6. The power of behavioral and social research to alter the situation it purports to describe and understand means that it is an intervention in the social process. Areas selected for study assume importance by virtue of their identification. The choices, therefore, whatever else they are, must also be considered political acts.

The juvenile delinquency is again a good example. The decision to study it rather than the larger social surroundings, drew attention away from some things and toward others. Focusing on genetic explanations of variations in the development of IQ and scholastic achievement draws attention away from critical requirements for altering the environments and practices which serve as crucial variables in reaching and exceeding the thresholds "established" (in whatever sense of that term) by genetic endowment (whatever *that* means). However much a part of us may protect the academic freedom of individuals to pursue untrammeled choices of this kind, they are value choices as well as intellectual ones. The absence of willful intent or awareness does not diminish the value component.

Axiom No. 7. If behavioral and social research has the capacity to alter the situation it studies and if it is an intervention in the social process, then it follows that the initiators and the performers of social inquiry may properly be held accountable, not only for the research that is undertaken, but also the political dimensions and consequences of that intervention.

The increasing degree to which behavioral and social researchers are being examined in the public arena is clear evidence of this. Whether those under scrutiny are the likes of James Coleman, Arthur Jensen, Christopher Jencks, and Jerome Bruner—or as recently happened here in Ohio, a local researcher with a hankering for press coverage, operating irresponsibly, and on his own—researchers should expect, by the very nature of the activity on which they have embarked, to be held publicly accountable for their work. Their work is assessable not only in terms of academic standards, but political and moral ones as well.

Axiom No. 8. Behavioral and social research has an inventional character. It has a way of creating phenomena that did not pre-exist the search for them.

The notion of self-fulfilling prophecies is an example of this. The consequence of "labeling" as used in social research is another; a term is invented or applied and quickly we begin to act as if a condition exists which conforms to the terminology (consider, for example, the function of such labels as "retarded," "socio-economic-status," "disadvantaged," "culturally deprived," "emotionally disturbed," etc.).

Axiom No. 9. Behavioral and social phenomena are almost infinitely complex. It is almost certain, therefore, that no situation is like any other. Furthermore, fully controlling or accommodating variables in order to render one situation like another (difficult as much from ethical and political considerations as practical ones) is equally problematical.

The dictionary defines research as "the diligent and systematic inquiry or investigation into a subject in order to discover or revise fact, theories, or applications." Science, on the other hand, is defined as "the knowledge or study of bodies of facts or truths systematically arranged and showing the operation of general law."

Here we have an unresolvable conundrum. The models of scientific inquiry we seek to emulate strive to achieve ends that seem unreachable in our domain; or, if reachable, upon their attainment they are unuseful precisely because they are derived from circumstances and conditions that are rarely, if ever, practically attainable.

In the natural sciences, we accept general laws as the desired end of inquiry. General law usually means the capacity for predictability. But predictability in science is typically achieved through the exercise of meticulous control. Control, in turn, with some notable exceptions, is achieved by the careful regulation of extraneous variables whose exclusion permits the regularities suggested by the laws to operate.

This suggests a rather different view of the oft-heard comparison between the so-called "hard" and "soft" sciences. The "hard" sciences are those where theoretical and moral limitations on control are limited or non-existent. The so-called "soft" sciences are those where such control is impossible, where the complexity is ubiquitous and ever changing, and where the consent of the studied must be secured. Our domains of inquiry are not "soft"; they are only difficult.

This begins to suggest that thinking in terms of "science" may well lead us in unproductive directions. Our task in social and behavioral research may not, in the final analysis, be productively thought of in terms of discovering law, but thought of in terms of achieving understanding of always changing, universally idiosyncratic, and culturally imbedded phenomena. While natural scientists can seek and demonstrate the general application of laws discovered through the rigorous control of variables, researchers in the behavioral and social domain may have to adopt wholly different strategies; for example, strategies dealing with the concrete rather than the abstract, the specific case rather than the general rule. This suggests greater emphasis on the process of inquiry rather than its outcomes, or on good and appropriate processes of inquiry as one of the most important and useful outcomes.

The tension between the search for generalization and the reality that no situation, circumstance, or individual is like another, cannot be avoided. Because it may never be resolvable, in our approaches to inquiry and our search for more productive impact, accommodations to that tension must find full expression.

These axioms and accompanying discussion may be summarized in three broad statements:

1. *Social and behavioral research is inherently reflexive.* Its concepts and its processes interact with each other and with the phenomena under study.

2. *Ethics and epistemology are inseparable.* Social and behavioral research is inextricably moral. It is not possible to "produce knowledge" apart from considerations of value.

3. *The inherent complexity of behavioral and social phenomena must be reflected in the models developed to guide the support of productive educational research and development.*

Illuminating Difficulties, Past and Present

What does the conceptualization presented above tell us about the policy conflicts and squabbles in our field? Does it provide explanatory power in the analysis of root problems? Before addressing the model task *per se*, I want to touch lightly on a number of characteristics of our field which I think become more understandable in light of the conceptualization drawn above.

Every educational research administration with which I was associated or that I have had opportunity to observe found itself bemoaning the intrusion of political considerations into what it otherwise felt ought to have been purely academic or administrative matters. This concern has ranged from discomfort at having to support "demonstrations" conceived or championed by White House or congressional figures, to incredulity at appropriate reductions that seemed inexplicable and unwarranted, to frustration—even indignation—at congressional earmarking of research budgets to protect R&D programs of one kind or another.

The conceptualization, however, suggests interpretations other than the intrusion of non-relevant considerations. It might be, for instance, that differing views of the worth of R&D activities may well be a function of differing epistemologies at work.

What is meant by different epistemologies? Consider the following example. A physicist might be able to tell us how it is possible that a bicycle can be ridden. This is something that is known in the way that physicists know things. But the ten-year-old knows how to ride a bicycle. Do they know the same thing? In a sense. In another sense, the way they know it is very different. Is one kind of knowledge better than another, more powerful, more useful? It depends entirely on the purpose, on whether one seeks to summon the fire department or design toys that depend on the interplay between acceleration, force, and balance.

In the conceptualization presented here, the tensions that exist between academicians and practitioners are not necessarily a function of the practitioner's lesser degree of sophistication as compared to the researcher (although for some purposes that may be true), so much as they are a function of the encounter of two different ways of understanding reality, two different ways of knowing. In part, however, the reason the tensions exist is that neither group fully recognizes the integrity of the other's epistemology. Furthermore, the scholars tend to believe in the superior status of their own. This belief is then met by the practitioner's equally unwarranted (though no less sincerely held) disdain for the worth of what the academics can do. Each manages to put off the other.

What happens between academics and practitioners is paralleled by what seems to be happening between research administrators and political persons. I was especially struck by a common reaction of congressional figures—one I was quite unprepared for—namely, the rather thinly veiled suspicion (sometimes rapidly shifting over into contempt) that many congressional figures seem to have for social scientists. I now believe that this circumstance is directly related to different epistemologies respecting the same domain. Politicians have to understand the policy in order to get elected, do good (as they see it), and stay elected. Social scientists claim they look at the same general domain, but politicians very often cannot understand or find value in what the social scientists report when they look. Social scientists experience this rejection as lack of sophistication, and turn away. Politicians experience the contributions of social science as irrelevant, confusing, and partial (in the sense of badly incomplete) and undertake their own rejections. When politicians find something they *can* understand (geographically-based or organized lobby group political influence and demonstrations are the kinds of activities they do grasp), they act.

Consider another kind of issue that might be said to plague educational research and development. It is the old puzzler about "why so little of what is done in research" finds its way into practice; the "shelves and shelves of research studies gathering dust" indictment; the press from policy and politician types alike for greater impact for the investment. Explanations for this complex phenomenon have ranged, and properly so, from supporting an insufficient variety of R&D functions (e.g., development, demonstration, dissemination) so that knowledge derived from research *can* be used, to doubt about the competence of educational researchers as a group, to inadequate policy analysis and prioritizing in support of research, to expectations for impact that exceed present and near-future understanding and capacity. All of these hold some truth.

But the conceptualization suggests other factors may well be at work. Once again, it is conceivable that the disjuncture is between different epistemologies, different ways of knowing, ways which are equally valid but proceed from different premises and different cultures within the larger whole. What we are looking at is not only the product of unsophisticated training, the absence of "class," and the lack of perspective, but also the imposition (or uncritical acceptance) of unwarranted status hierarchies with respect to the importance of one kind of knowledge as contrasted to another.

Even recent policy thinking, undertaken to work our way through some of these puzzles, seems to reinforce troublesome underlying attitudes. We used to talk, for example, about educational research and development, but now the approved terminology seems to be KPU—knowledge, production, and utilization—a concept whose overtones are hierarchical, if not in intent, then certainly in connotation. Hierarchies are ordinal, giving rise to status differentials, which, if unwarranted, are sooner or later counterproductive. Does the academic researcher know more than the teacher? About what? In what sense? Is it more powerful? In which environment and for what purpose? The conceptualization developed in the first part of this paper suggests that context, setting, and purpose are of fundamental importance in doing, understanding, and assessing behavioral and social research.

What about the inferiority complex that continues to afflict educational research? Why is it that we are constantly being urged to import talent from the disciplines or to "show one piece of research that has ever made a difference in schools?"

Without denying that there is much that can be learned about education from the application of the talents and techniques from the academic disciplines, we ought to be very clear about not being defensive here. The academic disciplines would be just as hard pressed to point to evidence that their contributions have had more substantial beneficial impact in any other social sector. The principal content, however, of the press to involve the academic disciplines in the problems of education is an implicit judgment that they are somehow stronger, brighter, or more incisive.

These statements ought not to be surprising, for indeed behavioral and social research collectively suffers from the inferiority complex. For decades its response has been to look to the natural sciences for models presumed to help us conceptually and methodologically. But that quest, for reasons already cited, seems largely inappropriate. Recommendations to look to the natural sciences for models, or to the "parent" behavioral and social disciplines, seem to come primarily from people who *do* most of that kind of work sympathetically echoed by those who wish to be thought well of by those who do most of it. In any case, it serves to continue the press for inquiry that is directed to the development of better theory rather than better practice. (I *know* that nothing is more practical than good theory. I also know that good theory alone does not make good practice. My statement here is concerned with balance, not exclusivity.)

What does the conceptualization developed here have to say about this kind of problem? For one thing it suggests that it might be appropriate in thinking about research and development to

adopt what might be called more egalitarian, more republican approaches to inquiry—approaches which allow and cultivate a broader range of types and locations and sponsorships for inquiry than is presently the case. For example, our thinking ought to easily embrace the view of Jim Kelley of the Ford Foundation that, among other things, educational research ought to include activities such as principals and teachers meeting to ask how to better accomplish their educational objectives. The tastes and fashion of academe would thus cease to be the sole frame of reference against which to guide, conduct, and evaluate research for education.

A Model

A model should be a representation of something. It may attempt to characterize the essential elements of a present reality, or it may serve as the basis from which a new reality may be constructed. It should serve to capture essence and to demonstrate or bring to mind the essential relations between constituent elements, "moving," as it were, as the character of its elements or the weights assigned to them vary in time and space. It can function as a kind of shorthand. It should function as a heuristic method from which new understandings can be derived. It should be simple, especially if it is to be the basis for policy; it must be easy to keep in mind, easy for policy makers of all kinds to understand and, therefore, to use.

The analysis presented here of the nature of behavioral and social research is still too abstract, even too philosophical, to form a basis for policy. It needs to be simplified. Even at the risk of compromising slightly on the fullness of its meaning, if the basic conception is to be useful for the development of policy, then it must be compressed still further.

A formulation that seems to have considerable promise in doing this focuses on the outcomes of research and those who have a stake in those outcomes. It can be presented thus:

Stated in words, the relationships between stakeholders and outcomes vary as the outcomes and stakeholders vary. Simple, perhaps even obvious, when subjected to further analysis, the model encompasses the central conclusions emerging from the conceptualization of the character of behavioral and social research.

Initially, the model can be said to offer variations at two levels. Presume that it would be possible to determine or establish the outcomes of behavioral and social research and, with similar degrees of objectivity, the indicated stakeholders. It would still be the case, however, that *perceptions* concerning outcomes and *perceptions* respecting stakeholders, by self or others, would also have to be encompassed in whatever analyses were done. The model can thus be approached at the level of fact and the level of percept.

Outcomes

If we explore the fullness of the meaning of outcomes and stakeholders, it should become clear how the two apparently simple concepts embrace a very great deal. The possible outcomes of research

are almost limitless. A variety of terms suggests themselves: knowledge, conclusions, policies, products, strategies, practices, processes, clues, hypotheses, theories, perspectives, choices, perceptions—the list could go on and on.

If we think about the form in which outcomes appear, we can then deepen and broaden the conception still further. The form of an outcome has a great deal to do with accessibility to stakeholders. In recent years we have increased our understanding of processes in educational research intermediate between good theory and good practice. We have learned much about development and dissemination processes and mechanisms. We are more intimately familiar with the concept of linkage agents. We have learned something about different norms and incentives which operate to "publish" the outcomes of research and development in places and forms that do little to kindle the attention or engagement of those beyond the research producers themselves. Finally, a focus on outcomes causes consideration of the full range of R&D functions and processes. Research, development, demonstration, dissemination, application and so on, in addition to more fine-grained concerns of design and methodology all come into play since they lead to different kinds of outcomes.

Stakeholders

Having a stake in something means, simply, that one stands to gain or lose as a consequence. As noted earlier, a stake can be both "real" and "perceived." (A perceived stake, of course, is just as real but in another sense.) Stakeholders can stand in relation to any given research outcome in a variety of ways. For example, it makes sense to talk of primary, secondary, and tertiary stakeholders. Any given stakeholder may have several stakeholder relations in respect to a research outcome—primary in one sense, secondary in others. A researcher with children who serves as a school board member might be a good three-pronged example.

It is not especially difficult to develop a comprehensive list of stakeholders in educational research. A taxonomy would include at least the following:

- Children (of many different kinds, ages, levels of affluence, cultural backgrounds, etc.)
- Parents (etc.)
- Teachers
- School administrators (superintendents, principals, etc.)
- Policy advisors
- Legislators and other political leaders
- Teacher educators (broadly defined)
- Researchers (academic, policy, local system, etc.)
- Evaluators
- Curriculum developers
- Managers of research institutions

- Publishers
- Manufacturers of pedagogical equipment and supplies
- Society
- School board members, state and local

It should be obvious that this listing is a very diverse one. It includes enormous differences of function, expertise, and responsibility. Built into the listing of stakeholders are the value and cultural differences that will be manifest in a society at any given point in time, that will exist between lay-persons and professionals, between the interests of the young and the interests of the older and more established. Implicit, therefore, in the listing of multiple stakeholders is the need to address their interests, to work as a broker among them where possible, or provide alternate means of expressing them where necessary. Research policy makers do not need to broker *all* interests, of course. There exist in the institutional structures of education mechanisms whereby such brokerage can occur in other settings (e.g., collective bargaining, state legislatures, school boards, etc.). Brokerage in those settings, however, is not possible unless the competing or contesting elements are adequately supported through appropriate R&D to assure fair opportunity.

Policy Implications of the Model

Developing a model is one thing. Translating it into practical policy is another. If the model and the view of behavioral and social research underlying it were to be adopted, what would that mean in concrete policy terms?

1. Legitimizing a Greater Array of R&D Activities

Recognizing the considerable number of stakeholders and acting in terms of a conception of behavioral and social research that attends to reflexivity, unremitting complexity, and the linkage to values requires a greatly expanded definition of what should legitimately be included under the general heading of educational research and development. The expansion would take place in several different directions.

At the top of the list would be much greater emphasis on the kinds of inquiry that would help practitioners directly and immediately to perform their responsibilities better. The development of self-administered evaluation strategies for teachers, school administrators, and other professional educators would be an example. Inquiry approaches designed to help principals and teachers in their own specific building settings to define and better achieve their educational objectives would be another. Question asking and data collection methods to aid the clients of schools in increasing the accountability and responsiveness of professionals would be another example. Together these provide illustrations of an underrecognized and underdeveloped sector of research to which much greater attention needs to be directed.

If the first examples constitute instances of redefinition growing out of attention to stakeholders, a second set of examples can be derived from the consideration of the special character of behavioral and social research. Educational research must devise rigorous research and development methodologies that recognize the reality of subjectivity, the integral relationship between inquiry and values, and the diversity of epistemologies and experience. Inquiry approaches need to be created and refined

so that they confront, instead of avoid, the tension between the search for generalizability and the certain knowledge that no situation is like any other. Research methodoiogies for conducting site-specific inquiry, for harnessing empathic techniques, for guiding and shaping the achievement of desired ends (i.e., *capitalizing* on the capacity of inquiry to invent phenomena rather than being inadvertently captured by it), all would need to receive additional attention.

Just as research needs redefinition, so does development. Development is a concept we in education have borrowed from industry. The term needs to be rethought in terms of its applicability to human and social systems and behaviors. My hunch is that the direction redefinition would take would cause us to see that manpower development and organizational development are both legitimate components of the concept of development applied to the behavioral and social domain.

In the worlds of physics, or chemistry, or electronics, development is the creation of a technical capability. Once the initial achievement is demonstrated, and if we presume future economic feasibility, then production is undertaken according to rigorous specifications. In the behavioral and social domain, however, it is human beings whose skills, understandings, and attitudes need to be developed. Each of us is different from the other; our institutions are no less diverse. In such a circumstance, reinventing the wheel may be far from inefficient; it probably constitutes the only meaningful and effective way of coming to grips with the underlying behavioral and social reality.

2. Decentralization of Authority and Responsibility for Educational R&D

Research policy is highly centralized at the present time. The bulk of the decision authority is presently exercised in Washington, D.C. Full recognition of the truly incredible diversity of stakeholders and the obligation to relate R&D outcomes to *all* stakeholders' needs would lead to a great pluralism of means, institutions, and resources for educational inquiry.

A. Practitioner Involvement

Policies must be devised federally to stimulate and support research and development activities down to the building levels of school systems. This could be done by creating flow-through percentage set-asides of federal programs (lower *and* higher education) to be used at the building level, or its equivalent, to support research, development, or evaluation functions related to the prime purposes of programs, in terms of which the percentages were calculated. To increase the critical mass, funds might be considered in the aggregate across programs so long as the inquiry supported was related to one or more of them. Set-asides would also be provided for state-level inquiry.

The funds thus available throughout the operating educational system would be available for expenditure for any of the activities and functions that could legitimately be included under the broadest definition of educational research and development and with full recognition of its many special characteristics. The monies could be used to train personnel in research or development techniques, to conduct evaluation, to undertake organizational development relative to the purposes of the parent program, in short, to do anything in an R&D mode that the officials closest to the operating program felt would be most helpful to the purposes of the program.

The effect of such a policy would be a great expansion in program-related educational R&D activity. More importantly, it would constitute empowering of practitioners in the commissioning of research and related activities.

B. Individual Entrepreneurs

Research policies adopted at the center would also need to cultivate diversity in other ways. The practice of defining research needs and priorities at the center is especially tempting, perhaps even irresistible. On the other hand, those who consider themselves members of the research community in the more traditional sense, are well aware of the close relationship between self-starting and creative advance. This means defined levels of support for unsolicited research maintained over time with proposed work juried and approved in the time-honored manner by panels of one's peers. Not all wisdom, not all awareness, and certainly not all creativity resides in Washington. The long-range health of research in theory development, an R&D outcome most likely to appeal to and come from academically oriented research performers, will be sacrificed if all the shots continue to be called centrally.

Certainly one of the most important ways of cultivating diversity is to pay close attention to the training of research and development persons fully representative of the richness and diversity to be found in the clientele of our educational institutions. An active posture must be pursued to assure a rich supply of persons representing different cultural, value, and ethnic interests in our society.

C. Institutional Support

Our field is sufficiently sophisticated to know that project support is appropriate for certain kinds of work but that real benefits come from other approaches to the support of educational R&D, particularly larger-scale efforts. Certain kinds of sustained, self-evolving research and certain kinds of educational development are not performed best in either schools or universities.

A dozen years ago R&D centers were invented. A few years after that educational laboratories burst upon the scene. Both are central components of a diversified educational R&D system. If they did not exist it would be necessary to invent them. Managed and monitored properly, they provide unique environments. Concentrated effort on an evolving line of inquiry can be undertaken. Large-scale efforts of either research or development can be undertaken under the guidance of well-connected policy boards and subject to systematic planning unavailable in other kinds of institutions. The care and keeping of such institutions is a delicate matter, however, and requires special attention on the part of both sponsoring agency and the institution's own management if optimal benefit and sustained productivity are to be achieved.

A second group of institutions to which careful additional attention needs to be directed, on stakeholder grounds, on research development grounds, and on larger system capability and awareness grounds, is colleges and universities that prepare teachers and other professional educators. While the availability of stable amounts and proportions of funds for unsolicited research proposals would do much to help here, attention also needs to be given to stimulating research productivity and awareness in professional education programs and institutions. To the extent that such institutions are outside the larger R&D system, they will continue to prepare people whose own frames of reference are similarly characterized. Clearly, if we do not change that situation in some directed way, we are *de facto* isolating one of the prime collections of stakeholder groups.

3. Analytical Demands and Policy Processes

In this final section I want to discuss briefly the implications of these ideas on policy processes themselves and, particularly, the kinds of analysis underlying them. While there will be some overlap here with things already said, the perspective adopted is different and important to include.

A. Procurement Policies

In the discussion of institutions, individual entrepreneurs, local system capability, and specialized institutions, it should be clear that part of what was being presented was specific recommendations for patterns of procurement. The matter itself needs to be addressed. The way in which agencies or a nation secures certain kinds of services depends upon what it believes those services are and the objectives and accomplishments desired. If we believe research is only what some academics do, then our procurement policies will reflect that. If we have more refined notions of how research proceeds, then our procurement policies will reflect that. If our thinking about research and development and its relationship to educational improvement proceeds in terms of images of status hierarchies that exist between and among various stages of how research does or should affect practice, then our procurement policies will reflect that, too.

For example, consider an experiment to test how school systems would react to the opportunity to do the kinds of inquiry I suggested might be done under a percentage set-aside program. Should school systems be invited to apply for such an effort or should someone from NIE just go to a superintendent's or principal's desk and say here's the money; this is what you could use it for; are you interested; what can we do to help, and so on? A true test of the proposed approach would eschew competition and would not require or expect research sophistication or proposal writing ability. It would allow failure. It would forthrightly confront the reality. It would trust its prospective participants.

I am somewhat more intimately familiar with another example because of my service the past six months on the congressionally established Panel to Review Plans and Operation of the Labs and R&D Centers. Our review so far has made it clear that the program purchase policy followed for the last five years was antithetical to the health and well-being of the Labs and Centers as institutions. As a procurement policy it was a failure if one of the central criteria for judging success or failure included whether or not the approach contributed to the enhancement of a multi-faceted system for the conduct of educational R&D.

The issue of how the lead agencies in educational R&D procure the work done under their sponsorship and what those agencies do to stimulate others to conduct themselves in mutually reinforcing ways is one of the prime areas for attention. These examples I have given only hint to the dimensions of analysis. They extend widely to Requests for Proposals, unsolicited research, and institutional support of several kinds. They embrace difficult issues and intersect with conceptually unrelated but no less important contracting, accounting, and grant giving procedures and requirements.

B. Policy Development

A second focal point of attention equally as important as procurement policies is policy development itself. If educational research and development as part of behavioral and social research is reflexive and so closely connected to matters of value and culture, then policy development needs to be thought of as a political process as much as it is an analytical/intellectual process. Unfortunately, many academics (therefore, many of those who would see themselves participating in the management of research programs and processes) shy away from politics, and tend not to like or understand it. To make matters worse, many academics are permeated with images of the status of the work they do that are antithetical or at least orthogonal to the conceptualization of behavioral and social research that has been sketched out here. What is worse, practitioners appear to buy into those images, too.

That problem notwithstanding, however, policy development processes in educational research would have to become much more political than they are now. Opportunities need to be provided for access and involvement of stakeholder groups through the development of research agendas, the holding of public hearings, and sustained contact over time with the major professional associations and representatives of key client groups. While many people involved with federal policy often seem to worry about getting co-opted when they do this kind of thing, they would be well reminded that co-option can be a two-way process and that, after all, all of those groups, either as performers or stakeholders, are the public *raison d'etre* for the existence of R&D in the first place.

C. Analysis, Analysis, and More Analysis

Finally I would make a plea for analysis, for good old-fashioned hard thinking, relentlessly pursued and applied. A few years ago in a memo to the House Committee on Science and Astronautics I suggested that researchers in the future might well be called upon to develop stakeholder impact statements analogous to the environmental impact statements required by the Environmental Protection Agency. I would now extend that concept to include those who develop research policy. I would ask them to specify not only the aims of their policy and the dimensions of their specific proposals, but to develop projections of who would be affected, how that effect might be felt, and what the consequences might be. I would require that in the development of such statements, the drafters be regularly expected to place themselves in the shoes of different kinds of stakeholders to examine from their perspectives what their proposal and their analysis looked like. I suspect that if assumptions were made clear as to how and why presumed benefits would occur, what the aims and objectives were, who would be affected, how they would be affected, and with what consequences, and if those documents were then subjected to public review and consideration before decision, there would be not only greater stability in policy development but there would be better policy as well.

Summary

Perhaps I have not been as precise or as clear as I wanted to be when I agreed last October to take on this assignment. There are a number of aspects of what I have presented on which I am prepared to compromise and adjust because I myself am not sure what the implications are and what should be done about them. On the other hand, I have shared with you some notions about the nature of behavioral and social research about which I have very deep convictions. They are notions that I think help to explain some of the enduring puzzles of our field of educational research and development as I have tried to illustrate for you.

After trying to capture those notions in what I kept referring to as the conceptualization, I presented a simple interaction model relating variant outputs to equally variant stakeholders. I concluded by examining some of the policy implications flowing from the model. Those implications lie in three main areas: the legitimization of a broader array of R&D activities, functions, and actors; decentralization of authority and responsibility for educational R&D; and, finally, the demand for much more careful analysis and attention to policy in its own right. If I have had a single purpose in sharing these ideas before you, it is to stimulate dialog and thought.

Bibliographical Note and Acknowledgement

In writing this paper I have freely pirated the ideas of others. In grateful acknowledgement of some of the more important sources of my booty I offer the list below. I want specifically, however,

to note my debt to John R. Seeley's article, "Social Science? Some Probative Problems." Many, though not all, of my "axioms" are restatements or revisions of "theorems" he presented in his paper. Finally, portions of this paper were originally prepared for a seminar on the Organization and Impact of Educational Research held in January 1978, sponsored by the Educational Research Board of the Social Science Research Council (Great Britain).

Ben-David, Joseph. "How to Organize Research in the Social Sciences." *Daedalus.* Spring 1973.

Campbell, Donald T. "Ethnocentrism of Disciplines and the Fish-Scale Model of Omniscience." *Organizational Riddles.*

Campbell, Donald T. "Qualitative Knowing in Action Research." Kurt Lewin Address. September 1, 1974, mimeo.

Carlson, Rae. "Understanding Women: Implications for Personality Theory and Research." *Journal of Social Issues.* Volume 28, Number 2, 1972.

Cronbach, Lee J. "Beyond the Two Disciplines of Scientific Psychology." *American Psychologist.* February 1975.

Eide, Kjell. *Educational Research Policy.* Center for Educational Research and Innovation. CERI/EI/70.01. Organization for Economic Co-Operation and Development. Paris.

Gadlin, Howard and Ingle, Grant. "Through the One-Way Mirror—The Limits of Experimental Self-Reflection." *American Psychologist.* October 1975.

Kohut, Heinz. "The Psychoanalyst in the Community of Scholars." Address at the University of Cincinnati. November 16, 1973, mimeo.

Levine, Murray. "Scientific Method and the Adversary Model." *American Psychologist.* September 1974.

Ornstein, Allan C. "Should Any Topic Be Off Limits to the Social Scientist." *The Chronicle of Higher Education.* May 13, 1974, p. 24.

Polanyi, Michael. *Personal Knowledge.* New York: Harper Torchbooks, 1964.

Seeley, John R. "Social Science? Some Probative Problems." In *Sociology on Trial,* edited by Stein and Vidach. Englewood Cliffs, N.J.: Prentice Hall, 1963.

Shulamn, Lee S. "The Psychology of School Subject: A Premature Obituary?" *Journal of Research in Science Teaching.* Volume II, Number 4.

Stent, Gunther S. "Limits to the Scientific Understanding of Man." *Science.* Volume 187, March 21, 1975.

Vickers, Geoffrey. *The Art of Judgment.* New York: Basic Books, 1965.

Vickers, Geoffrey. *Freedom in a Rocking Boat.* New York: Basic Books, 1971.

QUESTIONS AND ANSWERS

Question: How do you conceptualize current inquiry strategies? Are they something that somebody else comes up with and passes down? Are they behaviors? Are they instruments?

I would say all of the above. But let me share with you an experience I found fascinating. A local school came to us and said, "We have a problem. Can't you people at the University come down and help us?" I doubted that we had any way to help them. But I said on that occasion, "We'll come and listen," and we watched something truly fascinating happen. We went, sat, and listened, and people started to talk to one another. A structure, a mechanism, had been created, whereby folks who hadn't been talking to each other, now started to talk to one another. It turned out they had 80 percent of the answers already; they just hadn't figured out how to put the data together, and how to work with it and come up with suggestions.

I think that's inquiry. I think that we need to be able to say to those who are making policy about educational R&D, that that is a legitimate form of inquiry, just as the other forms we have. Remember, all we did was go and sit and listen and receive feedback. That's a strategy, a structure, an environment. There are probably dozens of others as well.

Question: Are there limits to acceptable inquiry strategies? Also, in the courses that we teach on inquiry, I take it that you would say that most of the current texts present a very limited, mainstreamed notion of what inquiry is, is that right?

Yes, I'd say that.

Question: But then, are there limits?

Well, I think there are limits. For example, one of the areas in which I know I'm probably going to have to compromise, although I don't really want to, is on the issues of *manpower* development and *organization* development being part of development R&D. I really believe that, but I know it's going to be very hard to sell, because the norm is to see it as "training" and "personnel preparation." Those are the metaphors we use, and so we don't see it as part of "R&D" development. That would be one kind of limit that would be placed on my conception. That doesn't stop me from wincing every time I hear personnel preparation called that, rather than development, in part because it means that there's an artificial separation between functions that ought not to be separated. It also denies those of us in R&D access to resources that I think need to be provided and thought of in R&D terms rather than training terms.

Question: I was impressed by your statement that research has to spring from a value system and has to take stakeholders into account. In teaching we tend to translate that into talking about experimental biases, etc., but how does one manage that kind of thing? What are your thoughts on that?

Let me make a distinction. I was talking about something that is the next layer below experimental bias, which is a problem too, of course. When I say the researcher has a vantage point, and he or she is in alliance with that vantage point, it may not be obvious. We may be in so much agreement that, like the fish, we don't notice the water in which we swim. The only answer I have is not a very satisfying one—that is, forcing ourselves to continually address that question. For example, is there anybody who could possibly take umbrage at this and say "*That's* not what we ought to be doing," or say "*That's* not what we're really interested in," or "What happens if we really *do* find out something like that?" Suppose Arthur Jensen had said, "What's likely to come out of this thing that I'm about to sit down and write? Can anybody do anything with it except reinforce biases? Is there really any acceptable outcome?" I have some very strong feelings about such matters, convictions, really. They go along with Gerhard Piel's recent analysis in the *Educational Researcher*. But I'm always impressed when I do my graduate seminar every quarter—and we have a very multicultural seminar because that's where our graduate students are—to see the reactions of different sectors of the educational community and the ethnic community to these kinds of issues, and to confront the different perceptions of reality. Let's say I can sympathize or empathize, but I really don't have firsthand experience, and there's no way that I could. Insuring the existence of that kind of dialog is part of the reason why there has to be so much effort in terms of training many different kinds of folks to participate in research and development. In the faculty dialogs and in the research design seminars, those kinds of issues will come up because they are, in effect, represented. My prescription isn't any more explicit than that. It's exhortative; I think we can do a lot better than we are.

Question: On the one hand you talk about decentralizing R&D authority and resources for the purpose of getting to stakeholders, and, on the other, you acknowledge the need for concentrated, programmatic R&D that's of a sustained effort. Would you address the cost-effectiveness of these choices, the trade-off involved in proportioning resources to those two positions.

I can try. Cost-effectiveness is always relative to some end, to some objective. If we adopt the frame of reference that we have a few objectives limited in number that we are going to reach, then we probably make decisions at the center and strive to get there. If our objective, however, is to take an entire sector of society and raise its consciousness about the values of inquiry, to raise its understanding of the characteristics, possibilities, and contra-indications of inquiry, then it seems we've got to distribute that capacity much more widely than it presently is distributed.

What tenth of one percent of the enterprise is now directed to education R&D in our field? Not only do we not support inquiry in our sector; we don't even train our professionals systematically as part of their ongoing professional responsibility. If we look at IBM, or Milacron, or GE, or Ford, we see that they take their professionals and run them through three or four weeks of training programs every year. Eight or ten percent of their annual paid work effort is in systematic retraining programs. But the educational system doesn't educate itself. On the contrary, we hire teachers on a ten-month basis, assume that they are individually responsible for continuing their own professional education, don't pay them twelve months salary, and so on. That's a large statement we make about ourselves and our society. It has something to say about values applied to education. It's like asking, is the Fourth of July rocket cost-effective in the move to get a person on the moon. The answer is, of course, no. Some of the principles are there, but the investment is nowhere near what's required. Back to what the percentages are. It's probably two- or three-tenths of one percent. Any other major enterprise, especially one that is designed to make money, would devote anywhere from three to eight percent to those kinds of activities. I have difficulty responding to your question, therefore, for two reasons. The first is we are really not at the point where you can talk about cost-effectiveness because we're so niggardly about the whole thing in terms of investment. The second reason is that

concentrated resources are inevitably *solution*-oriented to whatever problems are identified at the *center*, the only place with the power to allocate big dollars. Distributed R&D, however, would have to be *function*-oriented as far as the funding center was concerned, because the center would never be able to identify specific problems or solutions of *local* concern. Local governance mechanisms and the professionals, distributed as they are, would have to define the problems and strive for solutions. These are two very different frames of reference for talking about cost-effectiveness and, therefore, very difficult to resolve.

Question: If we expand our inquiry methods—broaden our definitions—will this dilute research methodology and make research less credible? What implications do your remarks have for the training of researchers?

If my remarks were to be interpreted as "Stop what you are doing, and do this other thing," yes, it would dilute things and it would be both troublesome and objectionable. I am not saying that. Just like every other dean in the world, I want a really eclectic approach. I want all the things that now work and a lot of other things that could work, too. I was asked at lunch about what would I do about the demands upon you as a National Center to show impact in five years. I would give some careful consideration about developing processes that could be used widely—inquiry processes, question making processes—that could be used widely to provide better answers to local, situationally specific needs and questions. I wouldn't do that at the expense of other kinds of things, however. That's where I would grow *on the margins* so that there could be a kind of redressing of what I think is now a major imbalance.

For the second part of your question, I think the present training of researchers is far too light on qualitative techniques, far too light on the moral and political implications of what they're doing, far too heavy on quantitative and manipulative. Another point would be more emphasis on such issues as what is knowledge in our domain, anyway? Classical questions of epistemology—how do you know, when do you know, what it is that you know, and so on.

Question: I wonder what model you can suggest for converting the Congress and let's say, the National Commission on Manpower Policy, to the position that you just expressed, away from quantitative toward more qualitative demonstrations of value?

If I'm right, then developing better inquiry tools for practitioners, not *our* image of inquiry tools but ones that satisfy *their* needs as *they* see them, would solve that problem for us. The logic is fairly direct. We must begin to satisfy some of the incredible needs that teachers, principals, and superintendents now encounter to know things of immediate and direct use to them. I don't know how many of you deal daily with their problems. I don't, but I see them on fairly frequent occasions. The dominant message is that they are ready to sit back and pay the fine for not doing whatever it is they have been asked to do, because it's just overwhelming. They don't know what to do. They don't have good strategies to find out what to do. Working with them, we might be able to help. I think if we can provide some help, we might see some very interesting pressures on Congress to get some of that money flowing through.

Take my own case as an example. The most valuable resources that I have in the College of Education at Cincinnati are three pieces of money. One is the Deans' Grant for the Bureau of the Handicapped which I can use as stimulus for inquiry and development. I carve it up into fifty dollar-a-day chunks and get faculty to do things on weekends and semester breaks, and activities that otherwise

I would be in a pure exhortation-only posture. I have similar kinds of money for implementing the 1980 standards, and I have an equal amount of money to do the same sort of thing generally that I created five years ago before they started slicing budgets. In other words, I have three percent of my budget which allows us to engage in a continuing process of inquiry as an *institution.* I defend those resources with all my power. It is the most important money I have. How many principals have $300 to do that? What would be possible if they had $8,000 or $10,000 a year to be able to engage in institutionally oriented inquiry relative to their mission, client relations, and so on. I imagine that if we could begin to provide some help by providing inquiry tools to meet local needs, not only would we see changes, we also would see some different kinds of folks getting into those positions because they would see the possibilities.

Question: What role, then, should traditional research play?

The role for traditional research frankly makes me uncomfortable. I don't see it very clearly in the future. But then I don't see it very clearly *now.* And I'm as puzzled by that as you are. Outside of the very explicit deliberate attempts to create a curriculum, or an organizational design which is crafted, evaluated, refined, disseminated, and so on, all of which follow the kind of classical model, we see the kinds of impact that are either accidental or appear to be accidental. For example, you bump into somebody in the hallway, and plug in a piece of information, and it happens to hit the vacant spot that was just waiting for it and off they go. Or it's of the sort that Jake Getzels writes about when he describes how the different conceptions of the child correlated rather nicely with the configuration of school classrooms in terms of their design and set-up. Have you seen that little piece? First, the classroom seats were screwed to the floor, the desks all in a row. Then, there were movable desks. Then there were chairs and tables, and finally, there were no chairs and tables at all just a free form. He traces how, over an eighty-year period of time, those different models of the classroom were in close match with different conceptions of who children are, conceptions that came out of research on child development. The function of research here was to change our image of children which then causes, in very indirect and nonspecific ways, changes to take place in other sectors of societies which then come back and affect schools. Now it's very difficult to go to Congress and ask for money for research that does that. So I'm troubled by the role for research. On the other hand, I also happen to believe it's very important. If you look, however, at a great portion of what we do in our field, it's difficult to say that very much of it is oriented to the kinds of activities, theories, or lines of development of the sort Getzels concerned himself with. My answer didn't satisfy you, I know that. I didn't satisfy myself either, but that's part of our reality, part of our puzzle.

Question: Who builds the tools? Is that a role for traditional research?

Yes it is, but one had better pay a lot of attention to the vineyard in which the tools are to be used. I guess what I find particularly intriguing is a number of the lines of inquiry that came through in the 1977 lab and center plans, where university types, academic types, and practitioner types, were in locked-together teams, with veto power on both sides, and there had to be consensus before one could move forward in design, methodology, and reporting. Creating such a relationship between researcher and practitioner is somewhat artificial, to be sure, but what we're then assuring is that the two different cultures must communicate well with one another and satisfy each other that they understand each other before they can move to successive stages. Tool development seems to me something that you want to have just as much participation on as I've suggested there ought to be in the development of research policies and research agendas. It's a cooperative and participative kind of activity. The best example of that is the work proposed at the Far West Lab in teaching and learning and the work being done under Lee Shulman at Michigan State.

Question: I know you talked to us about 1985, but I'm sitting here in 1978 in a National Center with $25 million to spend between now and 1984. I think we as researchers would like to see that R&D have as much impact as humanly possible. Yet we all operate under a double bind. We get paid to produce "deliverables." Most of what we do is to produce some kind of product. We think we have an expanded notion of R&D to some extent in that we have hotlines and workshops and activities that represent a wider array, but most of what we do is still product oriented. We are confronted, therefore, with the double bind of wanting to put our energies where we get paid but still wanting what we do to have impact and yet having to do *that* on our spare or free time. So in that context what recommendations would you make to us as professionals?

A slightly facetious summarization of your question is, how can I lend meaning to your lives in the next five years? How can you achieve the impact that you want when you are asked to "produce deliverables"—I'm translating a little bit—when your life is carved up into little segments and components which somehow don't seem to match up in the aggregate with what it is you think you *ought* to be doing or achieving? There seems to be a conflict or gap between the ways you are asked and expected to work, and what that end outcome is. One of the things that I would urge you to do is to challenge as respectfully and tactfully as you can, the kinds of constraints that you perceive to exist, that you perceive being imposed on you.

I don't know about you, but in an R&D context, I'm a little offended by the concept of deliverables. That strikes me as a strange euphemism, an inept metaphor. Deliverable. What does that mean? One gets a picture of a van driving by and somebody pitching three boxes off the back end—hopefully, not in a puddle, or somebody wheeling a barrel through. Somehow it doesn't fit the enterprise that we are about. If thinking proceeds in unspecifiable ways, unpredictable ways; if human beings grow best when they have a degree of responsibility over their lives, then processes which violate that conception are antithetical to the desired ends. Modeling is a terribly important concept, whether it be teachers and kids, or researchers and the rest of the educational system. If tact doesn't work, then try trickery. Carve out domains in your existence where you can function the way you know you need to function. If it means crossing Wednesdays off your calendar, the way I do, so that they don't exist and so that you can do the work you really need to do, then do it. As an institution, you can figure out ways to make accommodations that will get you there. It's a management problem, and an interesting one, because if you can figure out a way to do it, you can help the rest of us figure out ways to do it.

This is part of the problem of schools. There isn't any time to do the leverage activities that make a difference. That's not to say that the things we are doing all the time don't make a difference. They do, but somehow we are forgetting the yeast in the bread. We are always mixing together things, putting them in the oven, taking them out, wrapping them, so we can deliver. But there needs to be that growth time, that time for the surprises to happen, and you've got to take responsibility, if you can't persuade your sponsors. Remember, there are a lot of pressures on them, too—contracting officers, GAO, and all the rest of those people who seem to operate as if we are all out to steal the farm. They wrap us up in all these requirements and procedures to keep us from being illegal and immoral and irresponsible—and also effective, although in fairness they don't intend that. So we've got a responsibility to do what we can do. Do it creatively, do it legally, but do it.

Question: If we are really going to help practitioners, or if they are going to help themselves, maybe we need to get even a little bit more practical than what you have been suggesting so far. As I've visited schools, I've noticed something that just isn't lack

of resources or lack of caring on the part of the practitioners. It's a lack of thinking that I as a practitioner *should* care or am in a position *to* care, largely because of the oppressive systems that we have created for ourselves, what the professional organizations have done, or what the school bureaucracies themselves have done, in terms of compartmentalizing people's thinking. Do you agree?

Yes, I think you are right, and that's part of what I was getting at in making a plea for analysis and why I used the word metaphor and the idea of trying to get behind metaphors. Take a look at the word impact! Dent. Up against. Bang into. We don't really want impact. We want other kinds of things. We want people to ask new questions, for example, but lots of people don't want to ask questions. That's a reality. They don't want to be bothered. They don't want to disturb the careful treaties that they have negotiated with themselves, and we have tied up the system in structures and constraints, such as the certification and the ground rules that schools have to comply with in order to spend state and federal money legally. The whole categorical approach to aid is politically attractive and antithetical to what needs to happen, namely, a reconceptualization of the total resources that are available to the schools. We find it very hard to do that because we have to keep reporting in terms of the categories and we have to keep the reporting distinct and we cannot comingle the funds. We've invented that. We need to *un*invent it. We need to have places and times where we can do the kind of thinking I'm calling for; otherwise, it keeps on going. The pitch that I was making for a flowthrough percentage set-aside was to afford professionals that opportunity because there would then be a place in the budget structure for them to do some of that thinking. It's not happening now. It's very difficult for them to find the opportunity.

Question: My question is one about change and standards, and, therefore, inevitably values. If your exhortation is to appreciate and understand the different mindsets of the stakeholders and their life spaces, to have that relationship to outcomes and researchers, and to have a more egalitarian procurement process across stakeholders to do things like R&D, then at what point do we find an answer to the question about positive change, other than just an appeasement among stakeholders?

That's a potent question. Who's making the judgment about change, and who's making the judgment about whether it has occurred or not, and whether it's good or bad. It turns out that the answer is a political one. We have local, state, and federal agencies who have that responsibility. It's possible that the faith that I have implicitly placed in the body politic would not be fruitful or forthcoming. I'm willing to run that risk. I believe that I won't be disappointed.

Let me just conclude this answer with something that happened to me. There's a new housing development outside of Cincinnati—$70,000 or $80,000 homes. It's in a very rural community, a rural school district where everything is clannish. Suddenly these highly affluent folks representing 20 percent of the school system arrive. They want to know how they can change things for the better. They asked me out to talk. I listened to them; they were filled with stories. Some of them were very funny, and some were very tragic. When all was said and done I think the only thing I did that was useful to them was to point out that they were defining "better" to suit themselves. The system that they were encountering already had decided what was good. Thus, the new group had a very basic value conflict, not a this-is-better or this-is-worse against some common criteria. They were talking about different kinds of criteria. To me, it seems there are two ways they can get at that. They can either fight and win or lose, or they can try to achieve some accommodation where they can begin to understand one another and the differences that are manifest in their views of the world and what's good and what's not good. They can try to create a pluralism in that district that would serve both of their interests. They don't have it now. They are just as single-minded as they perceive the folks in that rural district to be. I would prefer we pursue strategies that let more flowers of different kinds bloom, and let the conflicts and contrasts between them work themselves out in the political arena.